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#### REMARKS

The present invention relates to a paving block for use in construction of a paved surface for bearing wheeled traffic. The paving block includes an upper surface 6, a lower surface 5 and lateral surfaces 7, 8. A substantial portion 8 of the upper surface is tapered in a range of  $0^{\circ}$  to  $15^{\circ}$  with respect to a vertical angle.

Additionally, at least one of the lateral surfaces has a vertically extending channel for water drainage. This vertically extending channel is wider than it is deep.

Claims 1 and 8, i.e. the only independent claims in this application, have now been amended for clarification purposes only. Specifically, Claims 1 and 8 have been amended to clarify that the angle of the tapered surface 8 is between  $0^{\circ}$  and  $15^{\circ}$  with respect to a vertical plane. This limitation, however, was inherent from the claims as earlier filed so that no new issues are raised by this minor clarification in the claims.

A primary advantage of the paving block of the present invention is its resistance to spalling. Such spalling can occur, for example, upon movement or tipping of the paving blocks.

The present invention achieves this resistance to spalling through the tapered surface 8 which lies in a range of  $0^{\circ}$  to  $15^{\circ}$  with respect to the vertical. By providing this relatively slight taper along the upper surface, the chance of spalling is minimized while simultaneously providing a substantially planar upper surface.

Furthermore, both Claims 1 and 8 clearly define that the vertical channels for water drainage are wider than they are deep. As such, adequate water drainage is achieved while still providing only a relatively long narrow opening from the top into the bottom of the paving block. This narrow opening thus makes the paving surface more suitable for

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pedestrian traffic since the dimension of the water drainage channel is smaller than, for example, a woman's high heel.

The Patent Examiner, however, has rejected previously submitted Claim 1 as unpatentable under 35 U.S.C. over Yoshida et al. in view of Geiger. As understood, it is the Patent Examiner's position that the Yoshida et al. patent shows Applicant's basic paving block construction while the Geiger reference is relied upon for its teaching of the water drainage channels. However, Applicant respectfully traverses this basis for rejection.

More specifically, unlike Applicant's invention, the Yoshida et al. patent does not disclose a paving block with a lateral surface in which the upper portion is tapered in the range of  $0^{\circ}$  to  $15^{\circ}$  in the fashion disclosed and positively claimed in Claim 1 of this application. Rather, in the Yoshida et al. patent, the tapered surface 4 (see FIG. 2B) is tapered more in the range of about  $45^{\circ}$  with respect to the vertical. The disadvantage of the Yoshida et al. patent is that relatively large channels having a dimension  $2 \times 1\frac{1}{2}$  (see FIG. 2A of Yoshida et al.) are formed between each adjacent paving block. This channel, furthermore, is further enlarged by the steep tapered surface 4 which adds the distance  $2 \times 1\frac{1}{2}$  to the overall size of the channel. Consequently, in response to wheeled traffic, a surface formed by the Yoshida et al. blocks would provide a very humpy ride. Furthermore, since the channels formed between adjacent Yoshida et al. blocks are relatively large, the heels of, for example, a woman's high heel shoe, would easily fit within the channel between adjacent blocks and thus is undesirable. In sharp contrast to this, in Applicant's invention, the rather mild taper, i.e. a taper in the range of  $0^{\circ}$  to  $15^{\circ}$ , provides a substantially continuous upper surface. This substantially continuous upper surface does not form a bumpy surface for wheeled traffic nor is it possible for shoes such as a woman's high heel to become entrapped in the space between adjacent blocks.

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Similarly, the Geiger patent admittedly teaches a paving block having water drainage channels formed between adjacent blocks. Unlike Applicant's invention as it is clearly defined in Claim 1, however, the channels formed by the Geiger blocks are not wider than they are deep. Rather, as best shown in FIG. 2, the depth and width of the water channels appear to be substantially the same.

Consequently, unlike Applicant's invention, the channels formed by the Geiger block would be sufficiently large for a woman's heel to become entrapped within the channels; otherwise, the channels would not have sufficient area to provide adequate water drainage. Applicant's invention, of course, overcomes all of these disadvantages by providing a relatively wide channel but having a shallow depth. The depth is sufficiently shallow to preclude a woman's high heel from entering into the channel, while the overall area of the channel is sufficient to provide adequate water drainage.

For all of the foregoing reasons, Applicant respectfully submits that the Patent Examiner's rejection of Claim 1 as unpatentable over Yoshida et al. in view of Geiger is in error and should be withdrawn.

The Patent Examiner has rejected Applicant's second independent claim, i.e. Claim 8, as unpatentable over Landers in view of Geiger. Applicant, however, specifically submits that this basis for rejection is in error and should be withdrawn.

More specifically, the Landers patent does not disclose a paving block having a lateral side with an upper tapered surface in the range of 0° to 15° as disclosed and positively claimed in Claim 8 of this application. As previously discussed, Applicant's paving block minimizes the possibility of spalling in the event of slight tipping of the blocks, and yet still provides a substantially continuous upper surface to provide not only a smooth ride for

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wheeled traffic, but also to prevent items, such as a woman's high heel, from being entrapped between adjacent blocks.

In sharp contrast to this, the Landers patent does not disclose a lateral surface having an upper tapered portion in the range of  $0^{\circ}$  to  $15^{\circ}$  with respect to the vertical. Instead, the Landers patent does disclose an upper tapered surface which is somewhat curvilinear. However, the angle of the upper tapered surface 3 of Landers is clearly greatly in excess of  $15^{\circ}$ , and, indeed, appears to be more in the range of  $75^{\circ}$  to  $85^{\circ}$ .

The disadvantage, of course, of the Landers paving block is that, due to the very large angle of the upper tapered surface 3, the upper tapered surface 3 necessarily has an outer edge very near the top of the paving block. Consequently, almost all of the lateral side of the Landers paving block lies in a vertical plane. As such, the Landers block would be highly prone to spalling resulting, for example, of slight tippage of the paving blocks due to the weight of wheeled traffic. In sharp contrast to this, the upper tapered surface 8 of Applicant's paving block extends for a substantial portion of the vertical height of the paving block. Consequently, Applicant's paving block does not spall in response to slight tippage of the paving block.

Applicant's remarks with respect to the secondary Geiger reference with respect to Claim 1 are equally applicable to Claim 8 and, for that reason, are incorporated by reference.

Applicant further wishes to make it clear that Applicant does not claim to have invented the paving block. Indeed, paving blocks were "invented" thousands of years ago. Rather, Applicant only claims the very specific paving block set forth in Claims 1 and 8 of this application. That specific construction for the paving block is simply not shown in the prior art references cited by the Patent Examiner and, since Applicant's specific construction does achieve advantages not obtainable by the prior art, Applicant respectfully submits that

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Claims 1 and 8 are allowable over the prior art of record. All remaining claims in this application depend from either Claim 8 or from Claim 1 and are, therefore, also allowable.

Formal allowance of the claims in this application is earnestly solicited.

Attached hereto is a marked-up version of the changes made to the claims by the current amendment. The attached page is captioned "Version with Markings to Show Changes Made."

Respectfully submitted,



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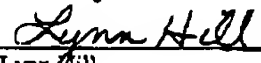
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CERTIFICATE UNDER 37 CFR 1.8(a)

I hereby certify that this correspondence is being sent to the United States Patent Office via facsimile (703-308-8623) on February 6, 2003



Lynn Hill

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**"VERSION WITH MARKINGS TO SHOW CHANGES MADE"**

**IN THE CLAIMS:**

Claim 1 has been amended follows:

1           1.     (Twice Amended) A paving block for use in the construction of a  
2     paved surface for bearing wheeled traffic, which paving block has an upper surface, a  
3     lower surface and lateral surfaces extending between the upper and lower surfaces and  
4     contacting in use at least part of a lateral surface of at least one adjacent paving block,  
5     a substantial portion of at least two lateral surfaces of the paving block extending to  
6     the upper surface being tapered along the entirety of the edge between the upper  
7     surface and the lateral surface, wherein at least one of the lateral surfaces has a  
8     vertically oriented shallow channel wider than it is deep extending from the upper  
9     surface to the lower surface and so positioned as to form, when the block is placed in  
10    abutting contact with another such block in use thereof, upwardly open gullies formed  
11    by two facing tapered surface portions, and narrow slot-like drainage passages formed  
12    by said [two facing] shallow channels, wherein the vertical angle at which the tapered  
13    portion extends with respect to the plane in which the remaining portion of the lateral  
14    surface lies is greater than 0° and less than 1.5°.

Claim 8 has been amended as follows:

1           8.     (Three Times Amended) A paving surface for the management of  
2     rainwater, floodwater or liquid spillage having a permeable layer on a supporting  
3     substrate layer, which supporting substrate layer is permeable to liquid and is of  
4     particulate material providing interstitial cavities for receiving rainwater, floodwater  
5     or spillage draining through the permeable layer, wherein the permeable layer is

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6 constructed at least partially by the close-fitting without joint filling of a plurality of  
7 paving blocks, wherein said paving blocks have an upper surface, a lower surface and  
8 lateral surfaces extending between the upper and lower surfaces and contacting in use  
9 at least apart of a lateral surface of at least one adjacent paving block, a substantial  
10 portion of at least two lateral surfaces of the paving block extending to the upper  
11 surface being tapered along the entirety of the edge between the upper surface and the  
12 lateral surface, wherein at least one of the lateral surfaces has a shallow channel wider  
13 than it is deep extending from the upper surface to the lower surface and so positioned  
14 as to form, when the block is placed in abutting contact with another block in use  
15 thereof, upwardly open gullies formed by two facing tapered lateral surface portions,  
16 and narrow slot-like drainage passages formed by two facing shallow channels,  
17 wherein the vertical angle at which the tapered portion extends with respect to the  
18 plane in which the remaining portion of the lateral surface lies is greater than 0° and  
19 less than 15°.